

Amendments to the Claims:

1. (Currently Amended) A diaphragm valve comprising:

 a fluid passageway passing through a valve body;

 a diaphragm for sealing said fluid passageway; and

 a valve seat, wherein said valve seat includes one or more protrusions that penetrate a portion ~~wherein a portion of the valve body is crimped against said one or more protrusions~~ to secure the valve seat to the valve body.

2. (Original) The diaphragm valve of claim 1, wherein said valve seat is an insert formed separate from said valve body.

3. (Original) The diaphragm valve of claim 1, wherein said valve seat is inserted within a valve seat recess.

4. (Currently Amended) The diaphragm valve of claim 1, wherein said valve seat is inserted within a valve seat recess formed by an outer body wall and open to said fluid passageway.

5. (Original) The diaphragm valve of claim 4, wherein said open side of said valve seat is flush with said fluid passageway at a point where the valve seat and the valve body meet.

6. (Original) The diaphragm valve of claim 1, wherein said valve seat includes a raised sealing surface that generally matches the contour of a surface on said diaphragm.

7. (Original) The diaphragm valve of claim 1, wherein at least some portion of said valve seat is case hardened.

8. (Original) The diaphragm valve of claim 7, wherein said hardened portion of said valve seat is substantially free from carbides.
9. (Original) The diaphragm valve of claim 1, wherein the valve seat is greater than 55 Rockwell C.
10. (Original) The diaphragm valve of claim 1, wherein the valve seat is harder than the diaphragm.
11. (Currently Amended) The diaphragm valve of claim 1, wherein said valve seat is a metal valve seat and wherein at least one of said one or more protrusions is on an outer edge of said metal valve seat.
12. (Currently Amended) The diaphragm valve of claim 1, wherein said valve seat is a metal valve seat and wherein at least one said one or more protrusions is angled with respect to a center radius of the metal valve seat.
13. (Original) The diaphragm valve of claim 1, wherein at least one of said one or more protrusions is angled away from a seat bottom portion.
14. (Original) The diaphragm valve of claim 1, wherein said valve seat is metal.
15. (Original) The diaphragm valve of claim 1, wherein at least some portion of said valve seat is hardened.
16. (Original) The diaphragm valve of claim 1 further comprising a thin layer of polymeric material covering one or more surfaces of said valve seat.
17. (Previously Presented) A diaphragm valve comprising:
a fluid passageway disposed within a valve body;

a diaphragm for sealing said fluid passageway; and

a valve seat insert comprising an inner circumferential surface and an outer circumferential surface, wherein said inner circumferential surface is substantially flush with said fluid passageway at a point where the valve seat and valve body meet, ~~said valve seat insert comprising a low temperature carburized surface that is substantially free from carbides~~ wherein said outer circumferential surface includes one or more protrusions that a portion of the valve body is deformed around to secure the valve seat to the valve body.

18. (Original) The diaphragm valve of claim 17, wherein said valve seat insert inner circumferential surface forms a continuous flow path with said fluid passageway.

19. (Original) The diaphragm valve of claim 17, wherein said valve seat insert inner circumferential surface is formed along the same axis as the fluid passageway.

20. (Original) The diaphragm valve of claim 17, wherein said valve seat insert further comprises a seat sealing surface, wherein said sealing surface is located proximate to said fluid passageway.

21. (Original) The diaphragm valve of claim 17, wherein said valve seat insert further comprises one or more protrusions for securing the valve seat to the valve body.

22. (Original) The diaphragm valve of claim 21, wherein said one or more protrusions form a seal surface between said valve seat and the valve body.

23-25. (Canceled).

26. (Original) The diaphragm valve of claim 17, wherein the valve seat is harder than the diaphragm.

27. (Currently amended) A valve seat comprising:

a generally annular seat body; said seat body comprising metal; and

one or more protrusions located on one or more surfaces of said seat body, wherein said one or more protrusions are configured to penetrate a portion of a valve body ~~are used~~ to secure and seal the valve seat to a valve body.

28. (Original) The valve seat of claim 27, further comprising a sealing surface associated with said seat body.

29. (Original) The valve seat of claim 28, wherein said sealing surface is located along a top portion of the seat body, proximate to an inner surface of said valve seat.

30. (Previously Presented) The valve seat of claim 27, wherein at least some portion of the valve seat comprises a low temperature carburized surface that is substantially free from carbides.

31. (Previously Presented) The valve seat of claim 30, wherein said portion of the valve seat forms a seal surface against which a metal diaphragm seals when the valve seat is assembled in a valve.

32. (Previously Presented) The valve seat of claim 31, wherein said valve seat is harder than a metal diaphragm with which it is used.

33. (Previously Presented) The valve seat of claim 31, wherein said valve seat is greater than 55 Rockwell C.

34. (Original) The valve seat of claim 27, wherein at least one of said one or more protrusions is angled with respect to the center radius of said valve seat.

35-59. (Canceled).

60. (Original) A method of staking a valve seat insert comprising the steps of:

inserting a valve seat insert into a recess formed in a valve body;
providing one or more protrusions on one or more surfaces of said valve seat insert; and
digging said one or more protrusions into at least one side wall of said valve body.

61. (Original) The method of claim 60, wherein said valve seat insert is metal.

62. (Original) The method of claim 60, further comprising the step of hardening at least some portion of said valve seat insert.

63. (Original) The method of claim 60 wherein said valve seat insert is harder than a diaphragm with which it is used.

64. (Canceled).

65-73. (Canceled).

74. (New) The diaphragm valve of claim 1 wherein the one or more protrusions penetrate into a wall that is integrally formed with the valve body.

75. (New) The diaphragm valve of claim 74 wherein the wall surrounds an outer circumference of the valve body.

76. (New) The diaphragm valve of claim 21 wherein an integral wall of the valve body is deformed around the one or more protrusions.

77. (New) The method of claim 60 wherein said at least one side wall is integrally formed with the valve body.